Zentralblatt für Bakteriologie Mikrobiologie und Hygiene

International Journal of Microbiology and Hygiene

Abstracts

Medical Microbiology · Virology · Parasitology
Hygiene · Preventive Medicine

Editors: G. Henneberg, Berlin (West) · H. D. Brede, Frankfurt a. M.
H. Petri, Berlin (West)

In Cooperation with W. Bartocha, Berlin (West) · H. Brunner, Wuppertal
K. A. W. Gerber, Berlin (West) · H. Hussels, Berlin (West) · W. Köhler, Jena
H. Krauss, Gießen · G. Linzenmeier, Essen · R. Lütticken, Köln
H. Mochmann, Berlin-Buch · G. Peters, Köln · H. Raettig, Berlin (West)
A. Rodloff, Berlin (West) · G. Schallehn, Bonn · R. Sonak, Münster
G. Spicher, Berlin (West) · F. Staib, Berlin (West) · G. Steidten, Berlin (West)
H. Stolp, Bayreuth · H. Werner, Berlin (West)

Volume 292

Gustav Fischer Verlag · Stuttgart · New York · 1985/86

ISSN 0177-3100

© Gustav Fischer Verlag, Stuttgart/New York 1985/86
Alle Rechte vorbehalten
Druck: Karl Grammlich, Pliezhausen
Printed in Germany

CONTENTS

General Medical Microbiology 1-28, 369-419

History, Epidemiology, Communicable Diseases (Legislation) 369-371

History 369
Epidemics 369-370
Mortality 370
Scientific Sessions 370-371
Epidemiology, Geomedicine
Communicable Diseases, Legislation and Statistics

Biology of Microorganisms 372-402

Taxonomy, Classification, Description of Bacteria 372-375
Morphology, Ultrastructure, Chemical Composition, Function 375-378
Nuclear Region 375
Ribosomes
Cytoplasmic Membrane
Cell Envelope: Cell Wall, Outer Membrane Structures 376
Flagella 376-377
Endospores 377
Protoplasts, Spheroplasts, L-Forms 377-378
Other Cell Structures
Physiology 378-382
General 378-379
Nutrition 379
Growth 379
Bacterial Adhesion, Colonization 379-380
Antimicrobial Effects 380-381
Drug Resistance 381
Pathogenicity, Virulence 381-382
Metabolism 382-394
Energy Metabolism: Electron Transfer, Aerobic and Anaerobic Respiration, Fermentations 382
Pathways, Transformation 382-383
Metabolism and Biosynthesis of
Proteins, Peptides, Amino Acids, Other Organic N-Compounds 384
Nucleic Acids, Nucleotides, Nucleosides, Purine and Pyrimidine Bases 384-385
Carbohydrates, Polysaccharides, Lipopolysaccharides 385-386
Lipids, Glycolipids, Phospholipids, Lipoproteins, Fatty Acids 386-387
Murein, Cell Membrane Constituents 387
Other Compounds 387-388
Enzymes and their Regulation 388-392
Mineral Metabolism
Chemolithotrophic, Methylotrophic, Methanogenic, Phototrophic Microorganisms 392-393
Microbial Products incl. Antibiotics and Toxins 393
N_2-Fixation 393-394
Genetics and Molecular Biology 394-400
General, Biochemical Genetics 394-396
Cloning, Genetic Engineering 396-397

Mutants	397-398
Gene Transfer	398
Plasmids	398-400
Bacterial Viruses	400
Bacteriocins	
Applied Microbiology and Biotechnology	400-401
Industrial Processes and Products	400
Food Microbiology	400-401
Biodeterioration	401
Microbial Ecology	401-402
General	401
Habitats, Dispersal, Interactions	401-402
Methods in Microbiology	403-419
Physical Methods	403-404
Chemical Methods	404
Analytical Methods	404
Stains	404
Electron Microscopy	404-405
Culture Media	405-407
Isolation, Cultivation	407-408
Diagnosis, Identification	409-417
Serological Methods	417-418
Susceptibility Testing	418
Cell Culture	
Laboratory Animals, Animal Experiments	418-419
Disinfection, Sterilization, Pest Control	
Disinfection	
Pasteurization and Preservation	
Sterilization	
Inactivation and Reactivation of Microorganisms: Other Information	
Pest Control	
Chemotherapeutics and Chemotherapy	1-28
General, Methods of Evaluation	1-3
Chemotherapeutics	3-6
Synthetic Substances	
β-Lactam-Antibiotics	6-15
Other Antibiotics	15-19
Chemotherapy	19-25
Medical Use of Antibiotics	25-28
Immunity and Blood-group Research	29-92, 193-256
Immunology	29-92, 193-248
Laboratory Techniques	29-32, 193-201
General Immunology	32-34, 201-203
Cellular Immunology	34-38, 203-211
General	34, 203-205
B Cells	205-206
T and B Cells, Surface Markers	34-37
Cytotoxity	206-207

Macrophages 37-38
Helper T Cells 207-209
Natural Killer Cells 209-211
Antigens 38-43,211-214
Incomplete Antigens, Haptens 43-44 43-44
Immunoglobulins 44-47,214-217
Structure and Function
Antibody Production
Immune Deficiency
Monoclonal Antibodies 48-49,217-219
AIDS 49-51,219-220
Complement 51-54,220-222
Interferon 54-55,222-224
Immune Complexes, Antigen-Antibody Reactions 224-225
Antigen-Antibody Complexes 55-56
Hypersensitivity 57-59,225-226
Allergens 59-61
Anaphylaxis 61-63,226
Immunochemistry 63-65,226-229
Immune Modulators 65-69,229-233
Interleukin
Toxins/Endotoxins/Immunotoxins 233-234
Endotoxins
Immunosuppression 234-236
Suppression of the Immune Response 69-71
Immunopotentiation 71-73
Serology of Infectious Diseases 73-76,236-238
Serology of Non-infectious Diseases 283-240
Serology of Chronic Polyarthritis 240
Autoimmune Diseases 76-77,240-241
Tumor Immunology 77-79,242
Transplantation-Immunology 79-81,242-244
Immune Tolerance
Vaccines and Sera 81-87,244-246
Applied Immunology 87-89
Effects of Radiation on Immunological Reactions 246-247
Immunogenetics 89-91,247-248
Miscellaneous, Unspecific Defense Mechanisms 91-92,248

Blood and Blood-group Serology 249-256

Blood, Serum Proteins, Serum Groups 249
Blood-groups (Erythrocyte-Determinants) 249-251
Blood-group Serology 251-254
Bloodtransfusions 254-256

Special Medical Microbiology, Including Communicable Diseases and their Control, Special Immunotherapy and Chemotherapy 97-130,289-354 420-448,449-504

Bacteriology

Micrococcaceae
Micrococcus
Staphylococcus

Streptococcaceae	
Streptococcus (incl. S. pneumoniae)	
Peptococcaceae	
Peptococcus	
Peptostreptococcus	
Sarcina	
Neisseriaceae	420-424
Neisseria	
Neisseria gonorrhoeae	420-422
Neisseria meningitidis	422-423
Acinetobacter	423
Moraxella	423-424
Branhamella	
Other Neisseriaceae	
Veillonellaceae	
Lactobacillaceae	424-427
Lactobacillus	424
Listeria	424-427
Erysipelothrix	427
Enterobacteriaceae	289-309
Escherichia coli	291-293
Infections	293-295
Plasmids	295-296
Drug Resistance	296
Enterotoxin	296-297
Edwardsiella	
Citrobacter	297-298
Salmonella	298-301
Shigella	301-303
Klebsiella	303
Enterobacter	303-304
Hafnia	
Serratia	304
Proteus	
Yersinia	304-307
Erwinia	
Other Enterobacteriaceae	
Pseudomonadaceae	307-309
Pseudomonas	307-309
Vibrionaceae	428-430
Vibrio	428-429
Cholera	
Aeromonas	429-430
Plesiomonas	
Pasteurellaceae	449-453
Pasteurella	449
Haemophilus	449-452
Actinobacillus	452-453
Gram-Negative Aerobic Rods and Cocci	
Azotobacter	

Agrobacterium	
Acetobacter	
Legionellaceae	431-433
Legionella	431-433
Flavobacterium	
Alcaligenes	
Brucella	433-434
Bordetella	434-435
Francisella	435-436
Anaerobic Gram-Negative Straight, Curved and Helical Rods	
Bacteroidaceae	436-438
Bacteroides	436-437
Eubacterium	438
Fusobacterium	
Selenomonas	
Chromobacterium	
Cardiobacterium	
Gardnerella	438-439
Eikenella	
Streptobacillus	439
Capnocytophaga	439
Veillonella	
Bacillaceae	454-458
Bacillus	454
B. anthracis	454
Clostridium	454-458
C. botulinum	454-455
C. difficile	455-456
C. perfringens	456
C. tetani	456-457
Clostridium sp.	457-458
Corynebacteriaceae	459-462
Corynebacterium	459-462
C. diphtheriae	459-460
Corynebacterium sp.	460-462
Arthrobacter	
Propionibacteriaceae	462
Propionibacterium	462
Eubacterium	
Actinomycetales	440-448
Actinomycetaceae	440
Actinomyces (Actinomycose)	440
Bifidobacterium	
Mycobacteriaceae	440-448
Mycobacteria	440-441
Mycobacterium	

General Features
Infective Agents of Mammalian Tuberculosis
Mycobacterium tuberculosis 441-442
Mycobacterium bovis 442
Tuberculosis 443-444
Pathology
Immunology, BCG 444-445
Diagnosis 445-446
Diagnostic Procedures
Chemotherapy 446-448
Epidemiology

Atypical Mycobacteria 448
General Features
Runyon Group I Photochromogenic M.
Runyon Group II Scotochromogenic M.
Runyon Group III Nonchromogenic M.
Runyon Group IV Rapidly Growing M.
Uncertain Affiliation

Mycobacterium leprae
Mycobacterium ulcerans
Mycobacterium paratuberculosis

Nocardiaceae

Streptomycetaceae

Other Actinomycetales

Spirochaetales
Spirochaetaceae
Spirochaeta
Treponema
Lues
Borrelia
Leptospiraceae
Leptospira

Helical/Vibrioid Gram-Negative Bacteria 471-474

Vibrioide 471-474
Spirillum
Campylobacter 471-474
Bdellovibrio

Mycoplasmatales
Mycoplasmataceae
Mycoplasma
Ureaplasma
Acholeplasmataceae
Acholeplasma
Spiroplasmataceae
Spiroplasma

Anaeroplasma

Rickettsiales 310-316
Rickettsiae 310-313
Rickettsia 310-312
Rochalimaea

Coxiella	312-313
Ehrlichiae	
Ehrlichia	
Cowdria	
Niorickettsia	
Bartonellaceae	
Bartonella	
Grahamella	
Anaplasmataceae	
Anaplasma	
Haemobartonella	
Eperythrozoon	
Chlamydiales	313-316
Chlamydia	313-316
Virology	97-130,475-504
General	97-99,475-476
Poxviridae	99-100
Herpesviridae	100-107,476-483
Adenoviridae	107-108,483-485
Papovaviridae	108,485
Parvoviridae	108-109,485
Orthomyxoviridae	109-113,485-487
Paramyxoviridae	113-115,487-489
Rhabdoviridae	115-116,489-490
Retroviridae	116-117,490-491
Reoviridae	117-118,491-493
Togaviridae	118-121,493-495
Picornaviridae	121-124,495-498
Coronaviridae	124-125
Arenaviridae	125
Bunyaviridae	
Hepatitis	125-128,498-501
AIDS	128-129,501-502
Slow Virus Infections	129-130
Other Viruses of Medical Interest	130,502-504
Phages	
Insect and Plant Viruses	
Mycology	317-354
General Mycology	317-318
Special Mycology	318-354
Dermatophytes, Dermatomycoses	318-321
Yeast-like Fungi, Candidamycoses	322-328
Candidamycoses, Candida-Immunology	
Algae, Prototheca, Protothecosis	
Cryptococcus, Cryptococcosis	328-333
Dimorphic Fungi, Systemic Mycoses	333-338
Moniliales, Aspergillus, Aspergillosis	338-343
Mycotoxins	343-344
Dematiaceae, Phaeohyphomycosis, Chromoblastomycosis	345
Mucorales, Mucormycosis, Zygomycosis	345-347
Zygomycetes, Zygomycoses	
Therapy of Mycoses, Antimycotics	347-354

Medical Parasitology	131-156
Parasitology, General	131
Protozoa	131-148
Mastigophora (Flagellata)	131-136
Leishmania	131-133
Trypanosoma	133-135
Trichomonas	135
Giardia	135-136
Rhizopoda	136-138
Amoebina	136-138
Sporozoa	138-146
Coccidia	
Toxoplasma	138-139
Sarcosporidia/Isospora	
Haemosporidia	139-146
Other Protozoa	146-148
Theileria, Babesia, Piroplasma	
Anaplasma	
Pneumocystis	
Ciliata	
Helminthes	148-156
General	
Trematoda	148-151
Schistosoma	148-151
Fasciola	
Cestoda	151
Taenia	151
Echinococcus	151
Nematoda	151-156
Trichinella	151-152
Ascaris	152
Ancylostoma	
Strongyloidae	152-153
Filaroidae	153-155
Toxocara	155
Nematoda etc.	155-156
Other Helminths	
Arthropoda	156
Arachnoidea	
Insecta	
Insecticides	
Nematocera	
Other Arthropods	
Other Animals of Medical-parasitological Importance	
Infections and Infectious Diseases, Special Topics	355-361
Infections	355-359
Septicemia	359-360
Bacterial Flora	360-361
Environmental Hygiene	93-96
	157-179, 257-288
	362-368, 505-528

Environment, General, Ecohygiene, Xenobiotics, Pests and Pesticides, Toxicology of Special Chemicals	362-368, 505-518
Environmental Hygiene, General	362
Environmental Planning	
Environmental Exposure, Ecotoxicity, General	362, 505-506
Xenobiotics, General	
Pests and Pesticides	362-366, 506-511
Toxicology of Special Chemicals	366-368, 511-518
Environment Protection	
Legislation, Guidelines	518
Air, Soil, Drinking Water and Industrial Water, Food, Pesticide Residues, Consumer Products	257-278
Air	257-259
General	
Weather and Climate	
Bioclimatology and Medical Meteorology	
Air Pollution	257-258
Air Examination	258
Effects	258-259
Legislation, Guidelines	
Soil	259
General	
Structure, Chemistry	
Microbiology, Fauna, Flora	
Soil Contamination	
Soil Examination	
Legislation, Guidelines	
Drinking Water and Industrial Water	259-265
General	
Water Resources	
Water Economy	
Water Requirements and Water Consumption	
Water Constituents	259
Water Catchment	259-260
Raw Water	
Protective Zones	
Drinking Water Treatment and Disinfection	260-262
Water Distribution	
Water Examination	262-264
Water-borne Diseases	265
Legislation, Guidelines	
Food, Pesticide Residues, Consumer Products	265-278
General	265
Food Requirements	
Food Production	265
Vitamins	
Nutritive Value	265
Packaging	265
Food Preservation, Food Additives	265-267
Catering	
Food Examination	267-273
Injuries Caused by Malnutrition	273
Food Poisonings	273-276
Food Infections	276
Pesticide Residues	276-277
Stimulants	277

Consumer Products 277-278
Legislation, Guidelines

Housing Hygiene and Community Hygiene, Hygiene of Public Facilities, Hygiene of Bathing and Swimming

General
Town Planning
Traffic, Road Design
Housing Hygiene
Community Hygiene, General
Hospital Design and Hygiene, Hospital-associated Infections
School Design and Hygiene
Kindergartens, Playgrounds
Sport Facilities, Camping, Caravaning
Balneology, Spas
Design and Construction of Baths
Swimming-bath Water, Examination, Treatment, Disinfection
Swimming-bath Hygiene and Communicable Diseases
Sauna, Solarium Facilities
Legislation, Guidelines

Quality of Waters, Liquid and Solid Wastes 157-162, 279-288, 519-528

General 519
Quality of Surface Waters 157-159, 279-280, 519
Water Pollutants 159-161, 280-284, 519-523
Pollution Control of Surface Waters
Liquid Wastes, Sewage 284-285, 523
Domestic and Communal Sewage, Industrial Wastes
Hospital Wastes
Sewage Treatment 161-162, 285-286, 523-525
Sewage Sludge 162, 286-287, 525-526
Utilization of Sewage and Sewage Sludge 162, 287-288, 526-528
Examination of Liquid and Solid Wastes
Solid Wastes 528
Domestic Refuse, Industrial Wastes
Wastes from Hospitals and Medical Practice
Utilization of Wastes (Recycling) 288
Compost
Waste-associated Health Resks
Legislation, Guidelines

Industrial Hygiene 93-96, 163-179

General 163
Physiology
Industrial Hygiene 93, 163

Hazardous Materials and Other Dangerous Influences 93-96, 164-177
Occupational Diseases 178-179
Legislation, Guidelines

Public Health, Personal Hygiene 180-182

Public Health Services, Public Hygiene, Public Health, Personal Hygiene, Recreation 180-182

General 180
Public Health Services, General
Special Problems of Public Hygiene
Hygiene in Handling of Corpses, Burial and Cremation
Health Statistics
Epidemiology of Non-communicable Diseases 180-182
Noise, Stress
Poisonings
Welfare, Preventive Health Care and Health Education
Perinatal Medicine
Population
Personal Hygiene, Clothing
Recreation, Leisure Time, Sport, Tourism
Legislation, Guidelines

Book Reviews 183-192